IN THE SPECIFICATION:

The paragraph beginning at page 10, line 16, has been amended as follows:

-- As in Figure 1a, the LFSN filter **11** of a signal processor **10a** filters the input electro-acoustical signal **22**. Said input electro-acoustical signal **22** can be a digital signal, according to the present invention. Then a filtered output signal **24a** of ~~said high-pass~~ the LFSN filter **11** is sent to a loudspeaker **20** (typically, through a power amplifier **18**). But, according to the present invention, the input electro-acoustical signal **22** is also fed to a displacement predictor block **14a**. If the value of the vibration displacement exceeds a predefined threshold value (that is a predetermined criterion), a displacement prediction signal **26a** from the block **14a** is generated and provided to the parameter calculator ~~16~~ 16a which generates a parameter signal **28a** in response to that signal **26a** and then said parameter signal **28a** is provided to the LFSN filter **11**. Based on said parameter signal **28a**, the transfer function of said LFSN filter **11** is modified appropriately and the output signal **24a** of said LFSN filter **11** has the vibration displacement component attenuated based on said predetermined criterion. --

The paragraph beginning at page 10, line 19, has been amended as follows:

-- The LFSN filter **11** attenuates only low frequencies, which are the dominant sources of a large vibration displacement. The diaphragm-coil displacement can be predicted from the input signal **22** by the displacement predictor block **14a** implemented as a digital filter. Generally, the required order of said digital filter is twice that of the number of mechanical degrees of freedom in the loudspeaker **20**. The output of this filter is the instantaneous displacement of the diaphragm-coil assembly of the loudspeaker **20**. The performance of the displacement predictor block **14a** is known in the art and is, e.g., equivalent to the performance of the part 9 shown in Figure 2 of US Patent No. 4,327,250, "Dynamic Speaker Equalizer", by D. R. von Recklinghausen. Detailed description of the parameter calculator ~~1a~~ 16 is shown in an example of Figure 2b and discussed in detail later in the text. --

The paragraph beginning at page 13, line 16, has been amended as follows:

-- The Equation 5 can be written with a single characteristic sensitivity by defining

$$\sigma_{dp\_m} = \sigma_c \sigma_{x \cdot v_c} \quad (6),$$

wherein $\sigma_{dp\_m}$ is the metrically correct characteristic sensitivity, given by

$$\sigma_{dp\_m} = \frac{a_g \phi_0}{R_{eb} k_t} \left(1 + a_{1 \cdot c} + a_{2 \cdot c}\right) \frac{1 - a_{1 \cdot t} + a_{2 \cdot t}}{1 - b_{1 \cdot c} + b_{2 \cdot c}} \quad (7),$$

wherein $a_g$ is a gain of the power amplifier ~~18a~~ 18 and D/A converter (not shown in Figure 2a but used in a case of the digital implementation) and $k_t$ is a total stiffness of the loudspeaker **20** suspension (loudspeaker's suspension stiffness) including acoustic loading from any enclosure. --

The paragraph beginning at page 18, line 23, has been amended as follows:

-- The flow chart of Figure 6 only represents one possible scenario among many others. In a method according to the present invention, in a first step **30**, the input electro-acoustical signal **22** is received by the signal processor **10a** and provided to the LFSN filter **11** of said signal processor ~~10~~ 10a and to the displacement predictor block **14a** of said signal processor **10**. In a next step **32**, the displacement predictor block **14a** generates the displacement prediction signal **26a** and provides said signal **26a** to the peak detector **16a-1** of the parameter calculator **16a** of said signal processor **10**. In a next step **34**, the peak displacement prediction signal **23** is generated by the peak detector **16a-1** and provided to the shelving frequency calculator **16a-2** of said parameter calculator **16a**. In a next step **36**, the shelving frequency signal **23** is generated by the shelving frequency calculator **16a-2** and provided to the sensitivity and coefficient calculator **16a-3** of the parameter calculator **16a**. In a next step **38**, the parameter signal **28a** (e.g., which includes the characteristic sensitivity and polynomial coefficients) is generated by the sensitivity and coefficient calculator **16a-3** and provided it to the LFSN filter **11**. In a next step **40**, the output signal **24a** is generated by

the LFSN filter **11**. Finally, in a last step **42**, the output signal **24a** is provided to the power amplifier **18** and further to the loudspeaker **20**. --